

Title (en)  
RIGIDITY MEASUREMENT DEVICE AND RIGIDITY MEASUREMENT METHOD

Title (de)  
STARRHEITSMESSVORRICHTUNG UND STARRHEITSMESSVERFAHREN

Title (fr)  
DISPOSITIF ET PROCÉDÉ DE MESURE DE RIGIDITÉ

Publication  
**EP 3575766 A4 20200212 (EN)**

Application  
**EP 17800994 A 20170607**

Priority  
• JP 2017010915 A 20170125  
• JP 2017021087 W 20170607

Abstract (en)  
[origin: EP3575766A1] Rigidity measurement apparatus (200) is a rigidity measurement apparatus that measures rigidity of an object to be measured and includes load estimator (240), displacement calculator (230), and rigidity calculator (250). Load estimator (240) estimates a load applied to a measurement point set on the object to be measured by using a captured image of the object to be measured. Displacement calculator (230) calculates a displacement of the measurement point by using the captured image. Rigidity calculator (250) calculates the rigidity of the object to be measured by using the load and the displacement.

IPC 8 full level  
**G01M 5/00** (2006.01); **G01B 11/00** (2006.01); **G01B 11/16** (2006.01)

CPC (source: CN EP)  
**G01B 7/16** (2013.01 - CN); **G01B 11/00** (2013.01 - EP); **G01B 11/16** (2013.01 - CN EP); **G01M 5/0008** (2013.01 - EP); **G01M 5/0058** (2013.01 - CN); **G01M 11/081** (2013.01 - CN); **G01N 3/068** (2013.01 - CN); **G01N 3/20** (2013.01 - CN); **G01N 3/28** (2013.01 - CN); **G01N 2203/0023** (2013.01 - CN); **G01N 2203/0282** (2013.01 - CN); **G01N 2203/0647** (2013.01 - CN)

Citation (search report)  
• [I] EUGENE J O'BRIEN ET AL: "Camera-based Bridge Safety Monitoring", 14TH EAST ASIA-PACIFIC CONFERENCE ON STRUCTURAL ENGINEERING & CONSTRUCTION (EASEC-14), HO CHI MINH CITY, VIETNAM, 6-8 JANUARY 2016, 8 January 2016 (2016-01-08), XP055654764  
• [I] "Bridge Maintenance, Safety, Management and Life Extension", 27 May 2014, CRC PRESS, ISBN: 978-1-315-76069-8, article AIRONG CHEN ET AL: "Non-target displacement measurement of structures using vision based approaches", pages: 668 - 675, XP055654765, DOI: 10.1201/b17063-97  
• See also references of WO 2018138943A1

Cited by  
NL2028808B1

Designated contracting state (EPC)  
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)  
BA ME

DOCDB simple family (publication)  
**EP 3575766 A1 20191204; EP 3575766 A4 20200212**; CN 108633303 A 20181009; CN 108633303 B 20240719; CN 109100100 A 20181228; CN 109100100 B 20200207; JP 2018119979 A 20180802; JP 2019117201 A 20190718; JP 6507380 B2 20190508; JP 6767642 B2 20201014; WO 2018138943 A1 20180802

DOCDB simple family (application)  
**EP 17800994 A 20170607**; CN 201780005391 A 20170607; CN 201811078309 A 20170607; JP 2017021087 W 20170607; JP 2018043716 A 20180312; JP 2019042105 A 20190308